Search in ENZYME for: sulfatase

Release 33, September 2003, and updates up to 28-Sep-2003

Please choose one of the following entries:

2.5.1.5 Galactose-6-sulfurylase.
(AN: Porphyran sulfatase.
Galactose-6-sulfatase.)

3.1.6.1 Arylsulfatase.
(AN: Sulfatase.
Aryl-sulphate sulphohydrolase.)

3.1.6.2 Steryl-sulfatase.
(AN: Steroid sulfatase.
Steryl-sulfate sulfohydrolase.
Arylsulfatase C.)

3.1.6.3 Glycosulfatase.
(AN: Glucosulfatase.)

3.1.6.4 N-acetylgalactosamine-6-sulfatase.
(AN: Chondroitinsulfatase.
Chondroitinase.
Galactose-6-sulfate sulfatase.)

3.1.6.6 Choline-sulfatase.

3.1.6.7 Cellulose-polysulfatase.

3.1.6.8 Cerebroside-sulfatase.
(AN: Arylsulfatase A.)

3.1.6.9 Chondro-4-sulfatase.

3.1.6.10 Chondro-6-sulfatase.

3.1.6.11 Disulfoglucosamine-6-sulfatase.
(AN: N-sulfoglucosamine-6-sulfatase.)

3.1.6.12 N-acetylgalactosamine-4-sulfatase.
(AN: Arylsulfatase B.
Chondroitinsulfatase.
Chondroitinase.)

3.1.6.13 Iduronate-2-sulfatase.
(AN: Chondroitinsulfatase.)

3.1.6.14 N-acetylglucosamine-6-sulfatase.
(AN: Glucosamine-6-sulfatase.
Chondroitinsulfatase.)

3.1.6.15 N-sulfoglucosamine-3-sulfatase.
(AN: Chondroitinsulfatase.)

3.1.6.16	Monomethyl-sulfatase.
3.1.6.17	D-lactate-2-sulfatase.
3.1.6.18	Glucuronate-2-sulfatase. (AN: Chondro-2-sulfatase.)
3.6.2.1	Adenylylsulfatase.
3.6.2.2	Phosphoadenylylsulfatase. (AN: 3-phosphoadenylyl sulfatase. PAPS sulfatase.)

181:677-683; Folkman et al. (1992) *Seminars in Cancer Biology* 3:89-96; Dhoot et al. (2001) *Science* 293:1663-1666. U.S. Patent Nos. 5,925,349; and 5,695,752. International Patent Applications WO 98/53071; WO 99/54448; WO 99/63088; WO 00/06086; WO 01/00828; WO 01/02568; WO 01/40269; WO 01/42467; WO 01/59127; WO 01/57058; WO 01/21640.

SUMMARY OF THE INVENTION

[0010] Novel sulfatases and polypeptides related thereto, as well as nucleic acid compositions encoding the same, are provided. The subject polypeptide and nucleic acid compositions find use in a variety of applications, including diagnostic applications, and therapeutic agent screening applications, as well as in treatment of a variety of disease conditions. Also provided are methods of modulating sulfatase enzymatic activity and methods of treating disease conditions associated therewith, particularly by administering inhibitors of the novel sulfatases.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] Figures 1A (1Ai and 1Aii) and 1B provide the cDNA sequence and amino acid sequence, respectively, of human SULF1. The full length cDNA sequence is SEQ ID NO:01, the open reading frame is set forth in SEQ ID NO:02, and the amino acid sequence of the protein encoded by the open reading frame is SEQ ID NO:03.

[0012] Figures 2A (2Ai and 2Aii) and 2B provide the cDNA sequence and amino acid sequence, respectively, of human SULF2. The full length cDNA sequence is SEQ ID NO:04, the open reading frame is set forth in SEQ ID NO:05, and the amino acid sequence of the protein encoded by the open reading frame is SEQ ID NO:06.

[0013] Figures 3A (3Ai and 3Aii) and 3B provide the cDNA sequence and amino acid sequence, respectively, of mouse SULF-1. The full length cDNA sequence is SEQ ID NO:07, the open reading frame is set forth in SEQ ID NO:08, and the amino acid sequence of the protein encoded by the open reading frame is SEQ ID NO:09.

[0014] Figures 4A (4Ai and 4Aii) and 4B provide the cDNA sequence and amino acid sequence, respectively, of mouse SULF-2. The full length cDNA sequence is SEQ ID NO:10, the open reading frame is set forth in SEQ ID NO:11, and the amino acid sequence of the protein encoded by the open reading frame is SEQ ID NO:12.

[0015] Figure 5 is a graph depicting the numbers of human SULF1 expressed sequence tags (ESTs) in normal and tumor tissue libraries.

[0016] Figure 6 is a graph depicting the numbers of huSULF1 ESTs in various tissues.

[0017] Figure 7 is a graph depicting the numbers of human SULF2 expressed sequence tags (ESTs) in normal and tumor tissue libraries.

[0018] Figure 8 depicts the results of SAGE analysis of huSULF-1 in normal and cancer tissues.

[0019] Figure 9 depicts the results of SAGE analysis of huSULF-2 in normal and cancer tissues.

[0020] Figures 10A (10Ai and 10Aii) and 10B provide the cDNA sequence and amino acid sequence, respectively of human SULF-2. The full length cDNA sequence is SEQ ID NO:13, the open reading frame is set forth in SEQ ID NO:14, and the amino acid sequence of the protein encoded by the open reading frame is SEQ ID NO:15.

[0021] Figures 11A (11Ai and 11Aii) and 11B provide the cDNA sequence and amino acid sequence, respectively of mouse SULF-2. The full length cDNA sequence is SEQ ID NO:16, the open reading frame is set forth in SEQ ID NO:17, and the amino acid sequence of the protein encoded by the open reading frame is SEQ ID NO:18.

[0022] Figure 12 depicts exon start and end sites, and exon length for human SULF2 gene exons.

[0023] Figure 13 is a schematic representation of human sulf-1 and sulf-2 protein domain.

[0024] Figure 14 is a schematic representation of an activity of a subject sulfatase.

DEFINITIONS

[0025] The terms "polynucleotide" and "nucleic acid molecule" are used interchangeably herein to refer to polymeric forms of nucleotides of any length. The polynucleotides may contain deoxyribonucleotides, ribonucleotides, and/or their analogs. Nucleotides may have any three-dimensional structure, and may perform any function, known or unknown. The term "polynucleotide" includes single-, double-stranded and triple helical molecules. "Oligonucleotide" generally refers to polynucleotides of between about 5 and about 100 nucleotides of single- or double-stranded DNA. However, for the purposes of this disclosure, there is no upper limit to